and said culturing provides for expression of the immunoglobulin light and heavy chains; and

harvesting specific antigen-binding antibody from culture supernatant, which antibody specifically binds an antigen of interest.

37. The method of Claim 36, wherein each of said first and second signal sequences is a yeast α-factor signal sequence.

38. The method of Claim 37, wherein each of said first and second signal sequences is a *Saccharomyces cerevisiae* α-factor signal sequence.

39. The method of Claim 36, wherein said *Pichia* is *Pichia pastoris*.

40. The method of Claim 39, wherein said *Pichia pastoris* is *Pichia* strain SMD1168.

41. The method of Claim 36, wherein said antibody specifically binds dioxin.

42. The method of Claim 36, wherein each of said first and second promoters is an inducible promoter.

43. The method of Claim 42, wherein each of said first and second promoters is an alcohol oxidase promoter.

44. The method of Claim 43, wherein said each of first and second promoters is a *Pichia* alcohol oxidase promoter.

45. The method of Claim 36, wherein the antibody is a mouse antibody, a humanized mouse antibody, or a human antibody.

46. The method of Claim 36, wherein the antibody is recovered from the culture supernatant at more than about 10mg/l.

47. A *Pichia* expression vector comprising:

a first and a second expression cassette, said first cassette comprising a first promoter operably linked to a nucleic acid encoding an immunoglobulin light chain operably linked to a first signal peptide, and said second cassette comprising a second promoter operably linked to a nucleic acid encoding an immunoglobulin heavy chain operably linked to a second signal peptide,

wherein introduction of said vector into a *Pichia* host cell provides for production of a recombinant immunoglobulin protein that specifically binds an antigen and is secreted by the host cell.

DUPLICATE

48. A recombinant *Pichia* cell containing the expression vector of claim 47.

49. A method for production of an antibody comprising the steps of:

culturing the recombinant *Pichia* cell of claim 48 so as to provide for antibody expression; and

harvesting the antibody from culture supernatant.

50. **(new)** A method for production of an antibody that specifically binds an antigen of interest, the method comprising the steps of:

culturing a recombinant *Pichia* cell, the cell comprising a vector comprising a first and a second expression cassette, wherein:

said first expression cassette comprising a *Pichia* alcohol oxidase promoter operably linked to a nucleic acid encoding an immunoglobulin light chain operably linked to a first signal peptide;

said second expression cassette comprising a *Pichia* alcohol oxidase promoter operably linked to a nucleic acid encoding an immunoglobulin heavy chain operably linked to a second signal peptide,

and said culturing provides for expression of the immunoglobulin light and heavy chains; and

harvesting specific antigen-binding antibody from culture supernatant, which antibody specifically binds an antigen of interest.